Environmental Security
ISO 14000 Environmental Management Systems

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What is ISO?

- International Organization for Standardization
- International voluntary consensus standards
- Most nations are members
- ISO Standards are reviewed and revised every five years

Environmental Management System Standards Why EMS Standards?

- **Environmental Performance Improvement**
- **Proliferating National Standards**
- **Potential non-tariff trade barriers**

ISO Technical Committee 207 Environmental Management

Organization Evaluation

- Environmental Management System
- Environmental Performance Evaluation
- Environmental Auditing

Product Evaluation

- Life Cycle Assessment
- Environmental Labeling
- Environmental Aspects in Product Standards

Environmental Management System
ISO 14000
What is it?

Plan	Do	Check	Act
Policy Envir. Aspects Legal and other	*Structure/Responsibility Training/Competency Communications Envir. Documentation Document Control Operational Control Emergency Preparedness and Response*	*Monitoring and Measurement Non-Conformance and Corrective and Preventative Action Records Env. Mgt. Audit*	*Management Review*
Requirements Objectives and Targets Environmental			
Management			

ISO 14000 and ISO 9000 Are Structurally Similar

ISO 14001 - Specification Standard Section 1 Scope

- Specifies core requirements for environmental management systems
- While performance criteria not included, organizations must factor in regulatory requirements and significant environmental impacts
- Applicable to those organizations that wish to:
  - Implement, maintain, and improve on its EMS
  - Assure itself of conformance
  - Demonstrate conformance to others
  - Seek certification or registration from a third party
  - Self-declare or self-determine conformance

Environmental Management Standard

Principle 1

An Organization should first focus on what needs to be done - it should ensure commitment to environmental management and define its policy

ISO 14000 - Specification Standard Section 4.1 Environmental Policy

- Appropriate to nature, scale, and environmental impacts
- Related to activities, products, and services
- Commitment to continual improvement and prevention of pollution
- Compliance with laws, regulations, and other subscribed-to requirements
- Framework for setting and reviewing environmental objectives and targets
- Documented, implemented, maintained, and communicated to all employees
- Made available to the public

Key Annex Issues:

- Reflects commitment of top management
- Periodically reviewed and revised
- Policy for organization, if it is sub-part, consistent with corporate body

Environmental Management Standard

Principle 2

An organization should formulate a plan to fulfill its environmental policy.

ISO 14001 - Specification Standard Section 4.2 Planning

4.2.1 Environmental Aspects

- Establish/maintain procedures to identify environmental aspects (Annex - initial review)
- Activities, products, and services - control and influence (Annex - factors to consider)
- Determine significant impacts - keep up to date (Annex - factors to consider)
- Considered in setting objectives

4.2.2 Legal and Other Requirements

- Identify and have access to requirements (Annex - industry codes of practice)

4.2.3 Objectives and Targets

- Establish and maintain at all relevant functions and levels of organization
- Consider legal and other requirements, env. aspects, technological options

4.2.4 Environmental Management Program

- Establish program to achieve objectives (Annex - R&D to decommissioning)
- Include means and timeframe for achieving
- Covers new or modified activities, products, or services
- Designate responsibility for objectives at each function and level

Environmental Management Standard

Principle 3

For effective implementation an organization should develop the capabilities and support mechanisms necessary to achieve its environmental policies, objectives, and targets.

ISO 14001 - Specification Standard
Section 4.3 Implementation and Operation

4.3.1 Structure and Responsibility

- Roles, responsibilities, and authorities defined, documented, and communicated
- Resources (human, financial) provided
- Appointed manager to ensure system viable and to report on performance

4.3.2 Training, Awareness, and Competence

- All relevant personnel to receive appropriate training
- Train on requirements of the system and on potential consequences of departure
- Competency, based on education, training, or experience (Annex - determine level needed)

4.3.3 Communication

- Establish procedures for internal communications
- Respond to relevant communications from external interested parties
- Consider process for external communications (Annex - may include dialogue)

4.3.4 EMS Documentation, 4.3.5 Document Control, 4.4.3 Records

- Paper or electronic
- Full documentation control procedure
- All relevant records to show conformance (Annex - examples given)

ISO 14001 - Specification Standard Section 4.3 Implementation and Operation (cont.)

4.3.6 Operation Control

- Operations, including maintenance, carried out under specified conditions
- Operating criteria established
- Procedures related to significant impacts of goods and services
- Communicating procedures and requirements to suppliers and contractors

4.3.7 Emergency Preparedness and Response

- Establish emergency and accident prevention, response, and mitigation procedures
- Revise following an incident

Environmental Management Standard

Principle 4

An organization should measure, monitor, and evaluate its performance

ISO 14001 - Specification Standard Section 4.4 Checking and Corrective Action

4.4.1 Monitoring and Measurement

- Monitor (including calibration) and measure key characteristics
- Track performance, operational controls, and objectives and targets
- Evaluate compliance with laws and regulations

4.4.2 Non-Conformance and Corrective and Preventive Action

- Procedures and responsibility to investigate, mitigate, and prevent
- Record changes in procedures as a result

4.4.4 Environmental Management System Audit

- Audit for conformance and proper implementation/maintenance
- Report to management for review
- Schedule, frequency, methodology, responsibilities, and requirements to be included (Annex - can be internal or external)

Environmental Management Standard

Principle 5

An organization should review and continually improve its environmental management system, leading to an improvement in overall environmental performance

ISO 14001 - Specification Standard Section 4.5 Management Review

- Management to periodically review system to ensure suitability, adequacy, and effectiveness
- Address needs for changes to policy, objectives, and elements of the EMS, including commitment to continual improvement
- Document the review

<u>Annex Issues</u>

- Include results from audits, extent to which objectives and targets met, changing circumstances and concerns from interested parties
- Observations, conclusions, and recommendations should be documented

ISO 14000 Environmental Management Systems Benefits

ISO 14000 provides:

- **an opportunity for global recognition of environmental programs with customers, governments, and the community**
- **the means to globally manage environmental compliance according to an internationally recognized norm and provide evidence of due diligence**

Business Integration of Environment, Health & Safety